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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Werenicz
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Title: METHOD FOR PRODUCING A CONTINUOUS THERMOPLASTIC COATING

Art Unit: 1733
Examiner: Aftergut

Commissioner for Patents
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MAIL STOP RCE

DECLARATION OF SHARF U. AHMED

I, Sharf U. Ahmed, state and declare as follows:

1. I set up a coating apparatus in an attempt to duplicate the set up of the coating apparatus that is partially illustrated in Figure 1 of EP 0315 013 A2. Photographs of the coating apparatus that I set up are attached at Tabs 1-4. The coating apparatus shown in the attached photographs differs from the coating apparatus partially illustrated in Figure 1 of EP 0315 013 A2 in that the coating head of the apparatus shown in the photographs is not in contact with the moving web. The coating apparatus includes a roller 14 and a coating head 16. In operation, a nonwoven web 18 travels past the coating head 16 and around the roller 14. Molten polymer 20 is dispensed from the coating head 16. The coating head 16 of my apparatus was capable of being positioned in contact with the roller, as well as not in contact with the roller.

2. I conducted a series of experiments to try to coat a nonwoven web with a polymer using the coating apparatus shown in the photographs attached at Tabs 1-4. The web was a nine inch wide spundbond polyester nonwoven web having a basis weight of 25 g/m². The polymer was VESTOPLAST 708 amorphous poly-alpha-olefin polymer.

3. EP 0315 013 A2 provides no details regarding the settings necessary to coat a nonwoven web. For the first experiment (i.e., Run 1) the coating head was in contact with the moving web, the web was moving at a speed of 10 feet per minute

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Mail Stop RCE, P.O. Box 1450, Alexandria, VA 22313-1450.

July 21, 2005
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(ft/min), and the pump speed was 10 rotations per minute. The VESTOPLAST 708 polymer was melted in the melter at 149°C (300°F). The die (i.e., the coating head) and hose that transported the melted VESTOPLAST 708 polymer were maintained at 149°C (300°F).

4. I then ran subsequent experiments in which I changed the speed of the web and the pump rate as indicated in Table 1 below.

5. I then moved the coating head away from the web such that it was not in contact with the web. It was difficult to precisely measure the distance between the coating head and the nonwoven web, but I determined that the distance was from 0.5 mm to 2 mm. The photograph at Tab 2 shows the coating head in a noncontact coating position. I conducted two experiments in which the coating head was not in contact with the moving web.

The position of the coating head relative to the web, the web speed, and the polymer pump rate of the run, as well as the nature of the coating produced by the runs, are set forth in Table 1 below.

Table 1

Run	Coating Head Position	Web Speed (ft/min)	Pump Speed (ft/min)	Coat Weight (g/m ²)
1	Contact	10	10	170-175
2	Contact	50	10	30-32
3	Contact	25	6	28-30
4	Non Contact	10	10	Intermittent Discontinuous Wavy lines
5	Non Contact	50	10	No coating

4. I inspected the resulting webs and observed that, when the coating head was not in contact with the web, the apparatus did not produce a continuous coating on the nonwoven web. When the web speed was 10 ft/min, the resulting web contained intermittent wavy lines of polymer extending discontinuously across the width of the web

and spaced apart from each other along the length of the web, i.e., in the machine direction of the web. When the web speed was 50 ft/min, no coating was present on the web.

5. I also inspected the coating apparatus after completing Run 5. I moved the coating head away from the web and observed large amounts of polymer on the stationary part of the coating head setup located beneath the movable part of the coating head, which is identified by number 22 in the photograph attached at Tab 4. I determined that polymer had dripped from the coating head onto the stationary part of the coating head setup during the noncontact coating runs. This was not observed when the apparatus was operated with the coating head in contact with the web.

6. Portions of the webs produced during Runs 1-5 are attached at Tabs 5-9, respectively. The web attached at Tab 5 was produced during Run 1 and includes a polymer coating having a coat weight of 170-175 g/m². The web attached at Tab 6 was produced during Run 2 and includes a polymer coating having a coat weight of 30-32 g/m². The web attached at Tab 7 was produced during Run 3 and includes a polymer coating having a coat weight of 28-30 g/m². The web attached at Tab 8 was produced during Run 4. The web of Run 4 does not include a polymer coating but contains intermittent wavy lines of polymer extending discontinuously across the width of the web and spaced apart from each other along the length of the web, i.e., in the machine direction of the web. The web attached at Tab 9 was produced during Run 5. The web contains no polymer coating, i.e., it is uncoated. The web appears unchanged from its original state.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so

made are punishable by fine or imprisonment or both under section 1001 Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent on which this statement is directed.

Further I declare not.

Date: July 21, 2005

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